

Abstract

An instrument and method are provided for sealing and joining or hemostatically dividing tissue, which is particularly suitable for laparoscopic and endoscopic surgery. The instrument makes use of the controlled application of a combination of heat and pressure to seal adjacent tissues, to join adjacent tissues, or to anastomose tissues, whereby tissue is heated for an optimal time and at an optimal temperature under optimal pressure to maximize tissue seal strength while minimizing collateral tissue damage. The instrument of the present invention is lightweight and therefore portable, and is particularly useful in field conditions where a source of external power may not be readily available.